BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

IN THE CLAIMS:

Please cancel claims 22-30 without prejudice to or disclaimer of the subject matter recited therein, and amend the remaining claims as follows:

1. (currently amended) A method of improving the performance of a direct feed fuel cell having an anode comprising a CO-tolerant catalyst, a solid polymer electrolyte, and a cathode, the fuel cell normally ~~outputting~~ providing power in a range from a minimum output to a maximum output, comprising ~~the steps of~~:

providing a supply of fuel to the anode for the oxidation of the fuel to produce an oxidation product and electrons at the anode;

providing a supply of oxidant to the cathode for reduction of the oxidant, thereby producing a reduction product; and

reducing the output power of the fuel cell at predetermined time intervals to be less than the normal minimum output.

2. (original) The method of claim 1, wherein the output power of the fuel cell is periodically reduced at predetermined time intervals.

3. (currently amended) The method of claim 2, wherein ~~the~~ each said predetermined time ~~intervals are~~ interval has a duration in a range from about 0.5 hours to about 4 hours.

4. (original) The method of claim 3, wherein the predetermined time intervals are about 30 minutes.

5. (currently amended) The method of claim 1, wherein a ratio of the normal maximum output and the normal minimum output is ~~in a ratio of up~~ less than or equal to 60:1.

6. (original) The method of claim 1, wherein the CO-tolerant catalyst comprises platinum and at least one element capable of adsorbing an oxygen-containing species at substantially lower potentials than a pure platinum catalyst.

7. (original) The method of claim 6, wherein the at least one element is selected from the group consisting of ruthenium, molybdenum, tin, tungsten, rhenium, osmium and iridium.

8. (currently amended) The method of claim 1, wherein reducing the output power of the fuel cell ~~is effected by~~ includes reducing the output current from the fuel cell at predetermined time intervals.

9. (currently amended) The method of claim 1, ~~wherein~~ further comprising providing the output power ~~is provided~~ to an external circuit~~, the circuit being~~ that is switchable between a closed circuit condition in which the flow of electric current is permitted and an open circuit condition in which the flow of electric current is

interrupted, ~~and~~ wherein reducing the output power of the fuel cell ~~is effected by~~ includes switching the circuit to the open circuit condition at predetermined time intervals.

10. (currently amended) The method of claim 1, further comprising ~~the step of~~ interrupting the supply of fuel to the anode at predetermined time intervals when the output power of the fuel cell is reduced.

11. (currently amended) The method of claim 1, further comprising ~~the step of~~ interrupting the supply of oxidant to the cathode at predetermined time intervals when the output power of the fuel cell is reduced.

12. (currently amended) The method of claim 1, wherein the cathode comprises platinum as catalyst.

13. (original) The method of claim 1, wherein the fuel comprises methanol.

14. (original) The method of claim 13, wherein the fuel comprises a liquid aqueous methanol solution.

15. (original) The method of claim 9, wherein the circuit is switched to the closed position for a period of greater than about 30 minutes.

16. (currently amended) The method of claim 9, wherein the circuit is switched to the open position for a period of less than about 30 seconds.

17. (currently amended) The method of claim 9, wherein ~~the step of~~ reducing the output power of the fuel cell at predetermined time intervals comprises ~~the steps of~~:

operating the cell to provide electric current in the circuit for an operating period of about 0.5 to 4 hours;

opening the circuit to terminate the flow of electric current for a rest period of 1 second to 30 minutes; and

ramping the current to increase from zero to a working value for a ramping period of up to 5 minutes.

18. (original) The method of claim 17, wherein the operating period has a duration of greater than about 30 minutes.

19. (original) The method of claim 17, wherein the rest period has a duration of less than about 30 seconds.

20. (original) The method of claim 17, wherein the ramping period has a duration of less than about 2 minutes.

21. (original) The method of claim 17, wherein the ramping period has a duration of greater than about 10 seconds.

Claims 22-30. (canceled)

31. (new) A method of providing power to a load from a direct feed fuel cell having an anode, a polymer electrolyte, and a cathode, wherein the fuel cell provides operational output power at a level falling within an operating range between a minimum output level and a maximum output level, the method comprising:

providing a supply of fuel to the anode and a supply of oxidant to the cathode to produce output power for the load across the anode and the cathode;

reducing a level the output power of the fuel cell at predetermined times to a power-down level that is less than the minimum output level; and

returning the level of the output power of the fuel cell to within the operating range after a predetermined power-down duration.

32. (new) The method of claim 31, wherein reducing the level of the output power of the fuel cell includes interrupting current flowing from the fuel cell to the load.

33. (new) The method of claim 31, wherein reducing the level of the output power of the fuel cell includes interrupting at least one of the supply of fuel to the anode and the supply of oxidant to the cathode.

34. (new) The method of claim 31, further comprising providing current from the fuel cell to a charge storage device.

35. (new) The method of claim 34, further comprising providing power to the load from the charge storage device during the predetermined power-down duration.

36. (new) The method of claim 34, wherein the charge storage device is a capacitor.

37. (new) The method of claim 31, wherein returning the level of the output power of the fuel cell to within the operating range is controlled such that the level of the output power of the fuel cell ramps from the power-down level to a level within the operating range over a ramping period.

38. (new) The method of claim 37, wherein the returning the level of the output power of the fuel cell to within the operating range is controlled such that the level of the output power of the fuel cell ramps continuously.

39. (new) The method of claim 31, wherein the predetermined times are periodic.